UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,145	07/14/2006	Minoru Fujimoto	P1360US	4195

1218 7590 04/05/2011

HESPOS & PORCO LLP
110 West 40th Street
Suite 2501
NEW YORK, NY 10018

EXAMINER	
MEHTA, HONG T	

ART UNIT	PAPER NUMBER
1789	

MAIL DATE	DELIVERY MODE
04/05/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/586,145	FUJIMOTO, MINORU	
	Examiner	Art Unit	
	HONG MEHTA	1789	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,8,9,12,13 and 16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6, 8, 9, 12, 13 and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *June 16, 2009 and July 14, 2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to Applicant's amendments and remarks filed on February 18, 2011. Pending amended claims 1-4, 6, 8, 9, 12, 13, and 16 are under examination. Claims 5, 7, 10, 11, 14 and 15 are cancelled.

In response to applicant's argument and explanation submitted by applicant on February 18, 2011 on the IDS filed on June 16, 2009 and July 14, 2006, the rejection is the Office Action dated on June 8, 2010 to IDS filed on June 16, 2009 and July 14, 2006 has been removed.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Applicant has amendment add the limitations adding liquid or gas having flavoring ingredient or seasoning of canceled claim 7, 14 and 15 in claim 1 and 2; therefore the rejections 102(b) over Ben-Nasr (US 5,338,575) has been withdrawn.

3. **Claims 1-4, 6, 8, 9, 12, 13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Musher (US 2,278,473).**

4. **Regarding claims 1, 2, 9, and 16**, Musher disclose a method for processing coffee beans (liquid-holdable material substance) in a closed chamber (processing vessel/processor) subjected to elevated pressure ranges (pg. 1, col. 2, lines 39-50) with

saturated/superheated steam (liquid having vaporizability) (pg. 2, col. 1, lines 18-25) and open to low pressure exposure which result in coffee bean's cell structure to expand and become relatively more porous (pg. 2, col. 1, line 5-17) to allow air, moisture, steam, or various solvents or other materials to be more readily penetrate within the structure of expanded coffee beans. Musher discloses various flavoring materials such as liquid, fruit or vegetable juices (fluid) may be admitted in the chamber so as to become impregnated within the expanded coffee beans during the treatment (pg. 2, col. 1, line 38-45). Musher teaches during the treatment flavoring materials the coffee beans are treated within a higher range of pressure to impregnated within the coffee beans in the chamber ('473, col. 2, ln. 29-45). Musher discloses the same vessel under varying lower pressures controls ('473, col. 45-58) to impregnated coffee beans with flavoring ('473, pg. 4, 7-13) which is considered to meet the limitation of pressure greater than a reduced pressure and less than atmospheric pressure because impregnated coffee beans are in an enclosed vessel under exerted high pressure as taught by Musher.

5. Additionally, Musher discloses closed chamber (processor) with varying elevated pressure and temperature ranges (pg. 1, lines 39-55; pg. 3, line 45-58) with adequate equipment. Musher discloses characteristics such as size and porosity of coffee beans may be controlled by varying the factors such as temperature, time and pressure of the expansion treatment to which the coffee bean are subjected to during the treatment (pg. 4, col. 1, lines 7-13). Since Musher teaches varying controls in factors such as temperatures and pressures, it is expected the closed chamber has temperature and

pressure adjusting portions to control pressures and temperatures degrees to heating or cooling.

6. Furthermore, Musher discloses discharging after the expanded treatment of coffee beans and placed into a roasting oven (pg. 2, col. 1, ln. 74-45; col. 2, ln. 1-9), which is considered a teaching of discharging expanded coffee beans from the closed chamber (processor) into another space/vessel i.e. roasting oven. Musher teaches grinding roasted expanded coffee bean into ground coffee (pg. 3, col. 1, n. 5-34) for brewing coffee beverages.

7. **Regarding claim 3**, Musher discloses superheated steam which is considered to be heated within the chamber (pg. 2, col. 1, lines 18-25).

8. **Regarding claim 4, 12 and 13**, Musher discloses that the chamber is rotated during the process, which is expected to move the coffee beans in the chamber causing vibration (pg. 2, col. 1, lines 2-4).

9. **Regarding claim 6**, Musher discloses multiple explosion treatment of coffee beans with lower pressures in chamber treatment may be repeated one or more times (pg. 3, col. 2, lines 45-58).

10. **Regarding claim 8**, Musher discloses superheated steam which is considered to be heated within the chamber (pg. 2, col. 1, lines 18-25). Musher discloses cooling of the roasted coffee beans with air, carbon dioxide or other inert gas in a cooling process (col. 2, col. 2, lines 44-53). Musher teaches a cooling step therefore the flavoring materials are expected to be cooled and solidified within the expanded coffee beans.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. **Claims 1-4, 6, 8, 9, 12, 13 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Nasr et al. (US 5,338,575) and in view of Musher (US 2,278,473)**.

14. **Regarding claims 1, 2, 9 and 16**, Ben-Nasr et al. (Ben-Nasr) disclose the process of decaffeinating raw coffee (liquid holdable substance) by means of a liquid solvent that is saturated with carbon dioxide (fluid in a super-critical state) and exposed to reduced pressure to expand raw coffee beans (col. 2, lines 16-25; col. 3, lines 12-21) to extract caffeine (col. 2, 42-46). Ben-Nasr disclose the treatment of saturating carbon dioxide and reduced pressure exposure lead to an expanded raw coffee bean which is considered to be more porous than unprocessed raw coffee beans (col. 6, Claim 1, lines 7-27). Ben-Nasr discloses raw coffee beans in the cascading connected pressure

vessels (col. 3, lines 63-68; col. 4, lines 1-24) wherein the reduction of pressure will occur, therefore it is expected that the raw coffee beans will vibrate due to the removal action depressurizing within the vessel. **With respect to claim 2**, Ben-Nasr discloses placing coffee beans in a pressure vessel (processing vessel) (col. 5, lines 38-68).

15. Ben-Nasr does not disclose adding another fluid to the expanded raw coffee bean. Ben-Nasr is silent on discharging the expanded raw coffee beans and grinding coffee beans.

16. However, Musher disclose a method for processing coffee beans (liquid-holdable material substance) in a closed chamber (processing vessel/processor) subjected to elevated pressure ranges ('473, pg. 1, col. 2, lines 39-50) with saturated/superheated steam (liquid having vaporizability) ('473, pg. 2, col. 1, lines 18-25) and open to low pressure exposure which causes the coffee bean's cell structure to expand and become relatively more porous ('473, pg. 2, col. 1, line 5-17) to allow air, moisture, steam, or various solvents or other materials to be more readily penetrate within the structure of expanded coffee beans. Musher discloses various flavoring materials such as liquid, fruit or vegetable juices (fluid) may be admitted in the chamber so as to become impregnated within the expanded coffee beans during the treatment ('473, pg. 2, col. 1, line 38-45). It would have been obvious to one of ordinary skill in the art to use Musher's flavoring materials such as liquid, fruit or vegetable juices (fluid) in Ben-Nasr's coffee bean processing because Musher teaches adding flavoring liquid materials to expanded coffee beans are known and successful. It would have been obvious to one of ordinary skill in the art to be motivated by Musher's adding flavoring liquid materials in

Ben-Nasr's coffee bean processing to provide flavored coffee beans for desired flavor profile in coffee beverages. Musher teaches during the treatment flavoring materials the coffee beans are treated within a higher range of pressure to impregnated within the coffee beans in the chamber ('473, col. 2, ln. 29-45). Musher discloses same vessel under varying lower pressures controls ('473, col. 45-58) to impregnated coffee beans with flavoring ('473, pg. 4, 7-13) which is considered to meet the limitation of pressure greater than a reduced pressure and less than atmospheric pressure because impregnated coffee beans are in an enclosed vessel under exerted high pressure as taught by Musher.

17. Musher discloses discharging after the expanded treatment of coffee beans and placed into a roasting oven ('473, pg. 2, col. 1, ln. 74-45; col. 2, ln. 1-9), which is considered a teaching of discharging expanded coffee beans from the closed chamber (processor) into another space/vessel i.e. roasting oven. Musher teaches grinding roasted expanded coffee bean into ground coffee ('473, pg. 3, col. 1, n. 5-34) for brewing coffee beverages. It would have been obvious to one of ordinary skill in the art to discharged expanded coffee beans and grinding coffee beans as taught by Musher into Ben-Nasr's processing of raw coffee beans because Musher's teaches conventional coffee bean processes such as roasting and grinding, are well-known preparation of coffee bean beverage art.

18. **Regarding claim 3**, Ben-Nasr discloses raw coffee beans (liquid holdable substance) is exposed to temperature of 65℃ to 90℃ (149℉ to 194℉) which is

considered to be heated when raw coffee beans are supersaturated with carbon dioxide (col. 3, lines 12-21) and under reduced pressure (impregnating step).

19. **Regarding claim 4, 12, and 13**, Ben-Nasr discloses raw coffee beans in the cascading connected pressure vessels (col. 3, lines 63-68; col. 4, lines 1-24) wherein the reduction of pressure will occur, therefore it is expected that the raw coffee beans will vibrate due to the removal action depressurizing within the vessel.

20. **Regarding claim 6**, Ben-Nasr discloses steps of reducing pressure with coffee beans are repeated (col. 6, Claim 2, lines 38-39).

21. **Regarding claim 8**, Ben-Nasr discloses raw coffee beans (liquid holdable substance) is exposed to temperature of 65℃ to 90℃ (149℉ to 194℉) which is considered to be heated when raw coffee beans are supersaturated with carbon dioxide (col. 3, lines 12-21) and under reduced pressure (impregnating step). Ben-Nasr is silent about the cooling step.

22. Musher discloses cooling of the roasted coffee beans with air, carbon dioxide or other inert gas in cooling process ('473, col. 2, col. 2, lines 44-53). Musher teaches a cooling step therefore the flavoring materials are expected to be cooled and solidified within the expanded coffee beans. It would have been obvious to one of ordinary skill in the art to employ Musher's cooling step in Ben-Nasr's processing of coffee beans to provide a more stable, solidified-flavored coffee bean.

23. **Regarding claim 10 and 11**, Ben-Nasr discloses placing coffee beans in a pressure vessel (processor) (col. 5, lines 38-68) with operating controls on temperatures and pressures to be introduced into the pressure vessels (col. 4, lines 30-39). Since

Ben-Nasr teaches operating controls in factors such as temperatures and pressures, it is expected the vessel has pressure and temperature adjusting portions to control pressures and temperatures degrees for heating or cooling.

Response to Arguments

24. Applicant's arguments with respect to claim 1-4, 6, 8, 9, 12, 13 and 16 have been considered but are moot in view of the new ground(s) of rejection.

25. Applicant has amended add the limitations adding liquid or gas having flavoring ingredient or seasoning of canceled claim 7, 14 and 15 in claim 1 and 2; therefore the rejections 102(b) over Ben-Nasr (US 5,338,575) has been withdrawn. However, new rejections 103(a) Ben-Nasr in view of Musher as discussed in the above rejections teach the instantly claimed invention.

Applicant has amended claim 1 and 2 to include new limitation step of discharging and grinding step in a method of processing a liquid-holdable material substance.

26. Applicant argues Musher has no suggestion of performing flavoring or seasoning in the chamber which is kept at a pressure of greater than the reduced pressure and smaller than the atmospheric pressure.

27. Musher clearly teaches various flavoring materials such as liquid, fruit or vegetable juices (fluid) may be admitted in the chamber so as to become impregnated within the expanded coffee beans during the treatment (pg. 2, col. 1, line 38-45). Additionally, Musher discloses closed chamber (processor) with varying elevated

pressure and temperature ranges (pg. 1, lines 39-55; pg. 3, line 45-58) with adequate equipment. Musher discloses characteristics such as size and porosity of coffee beans may be controlled by varying the factors such as temperature, time and pressure of the expansion treatment to which the coffee bean are subjected to during the treatment (pg. 4, col. 1, lines 7-13). Since Musher teaches varying controls in factors such as temperatures and pressures, it is expected the closed chamber has temperature and pressure adjusting portions to control pressures and temperatures degrees to heating or cooling. Musher teaches during the treatment flavoring materials the coffee beans are treated within a higher range of pressure to impregnated within the coffee beans in the chamber ('473, col. 2, ln. 29-45). Musher discloses same vessel under varying lower pressures controls ('473, col. 45-58) to impregnated coffee beans with flavoring ('473, pg. 4, 7-13) which is considered to meet the limitation of pressure greater than a reduced pressure and less than atmospheric pressure because impregnated coffee beans are in an enclosed vessel under exerted high pressure as taught by Musher.

28. Applicant argues Ben-Nasr does not suggest performing flavoring or seasoning under a reduced pressure in the same chamber in which the pressurizing and depressing is performed. Additionally, applicant argues processing within same chamber saves time.

29. Ben-Nasr discloses placing coffee beans in a pressure vessel (processing vessel) ('575, col. 5, ln. 38-68) and immersion in the same vessel as claimed. In response to applicant's arguments claimed invention within the same chamber saves time, this would be an expected property. It is common sense that if one did not have to

transfer materials to another apparatus in processing that time would be saved in an operation. Furthermore, Ben-Nasr teaches a continuous procedure with coffee beans is a cost investment compared to a discontinuous procedure ('575, col. 4, ln. 6-9).

30. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The rejection as discussed above is combined teaching of Ben-Nasr and Musher. Musher clearly teaches various flavoring materials such as liquid, fruit or vegetable juices (fluid) may be admitted in the chamber so as to become impregnated within the expanded coffee beans during the treatment ('473, pg. 2, col. 1, line 38-45).

31. It would have been obvious to one of ordinary skill in the art to use Musher's flavoring materials such as liquid, fruit or vegetable juices (fluid) in Ben-Nasr's coffee bean processing because Musher teaches adding flavoring liquid materials to expanded coffee beans are known and successful. It would have been obvious to one of ordinary skill in the art to be motivated by Musher's adding flavoring liquid materials in Ben-Nasr's coffee bean processing to provide varies flavored coffee beans for desired flavor profile in coffee beverages.

32. Applicant argues significant advantage wherein formed porous liquid-holdable materials or beans are not moved from one chamber to another after the initial expansion, and when performing the step of feeding another liquid or gas having a

flavoring ingredient. Additionally, the flavoring is performed under a shorter time and reduced pressure as result increase impregnation during the flavoring step.

33. In response to applicant's arguments claimed invention within the same chamber saves time, this would be an expected property. It is common sense that if one did not have to transfer materials to another apparatus in processing that time would be saved in an operation. Additionally, Musher discloses same vessel under varying lower pressures controls ('473, col. 45-58) and time to impregnated coffee beans with flavoring ('473, pg. 4, 7-13) as discussed above in the rejection therefore Musher's coffee bean process is expected to result in an increased impregnation of flavoring in the coffee beans ('473, col. 3, ln. 46-51) as argued.

Conclusion

34. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HONG MEHTA whose telephone number is (571)270-7093. The examiner can normally be reached on Monday thru Thursday, from 7:30 am to 4:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kelly Bekker can be reached on 571-272-2739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kelly Bekker/
Primary Examiner

Htm